

# Fair Radio Sales Co.

1016 E. EUREKA ST. • P.O. BOX 1105 • LIMA, OHIO 45802

BULK RATE  
U.S. POSTAGE  
**PAID**  
Lima, OH 45802  
Permit No. 114

## FALL 1996 CATALOG SUPPLEMENT

PHONES: 419/227-6573 or 223-2196  
MON.-FRI. 9-5:30, SAT. 9-1

FAX MACHINE: 419/227-1313

E-MAIL: fairradio@alpha.wcoil.com

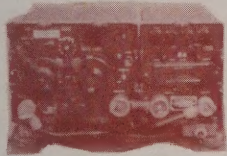
HOME PAGE: <http://alpha.wcoil.com/~fairradio/>

**PRICES ARE F.O.B. LIMA, OH  
ALLOW FOR SHIPPING CHARGES!**

ITEMS OVER 150 LBS. SHIPPED  
MOTOR FREIGHT COLLECT

INCLUDE PAYMENT IN FULL  
USE YOUR VISA/MASTERCARD OR DISCOVER

### Gov't-Recond. VRC-10



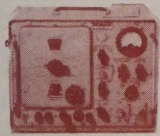
AN/VRC-10 RADIO SET used in 1950's-1960's military vehicles. Consists of "government-reconditioned" RT-68 transceiver covering 38-54.9 Mhz FM @ 15 watts max with PP-112

24 VDC power supply and MT-299 rack. Also "unused" accessories CX-1211 RT-PP interconnect cable, AB-15 mast base, H-113 and H-63 headsets, M-29 mic, LS-166 speaker, AN/GSA-6 chest group, CW-206 antenna bag, CW-330 canvas cover, CG-530 RF cable, hardware, and manual. Knob & meters removed by government but we supply "used" ones for customer to install; RT and PP paint color may not match. 135 lbs sh. GOV'T-RECONDITIONED, \$225.00

### Multi-band Antenna

TRIVEC AVANT AV-455-3 MULTIBAND WHIP ANTENNA, operates over bands 30-88 and 108-174 Mhz @ 50 watts, 225-400 Mhz @ 100 watts; 50 ohm input. VSWR 2.5:1 max; gain -10, -2.5 or 0 dBi. Fiberglass whip & load; 56"L. Base 5.5" dia X 5.5"H x 4.5"H spring; with four mount holes 3.2" o.c. and N-connection. 7 lbs. #AV-455-3, NEW, \$85.

### Gov't-Recond URM-25D



AN/URM-25 SIGNAL GENERATOR with accessories; 10 KHz to 50 Mhz in nine bands. Output to 100K uv into 50 ohms. Modulation 0-80% 400 or 1000 Hz; internal 1 Mhz calibrator.

Includes MX-1487 impedance adapter, SM-35 antenna simulator, attenuators CN-223-224, RF cable & manual. Requires 115 V 60 Hz; 11.3x14 x10.8, 54 lbs. GOV'T-RECONDITIONED \$195.

### Transit Case

CY-7542/PRC-104 TRANSIT CASE, fiberglass case designed to protect PRC-104 backpack radio in foam insert (Insert can be cut out). Measures 15.3"Hx22"Wx14.5"D with hasp fasteners, side handles and pressure release button. Good size case for other storage uses; 30 lbs sh. UNUSED, \$35.00



### Preselector / RF Amp



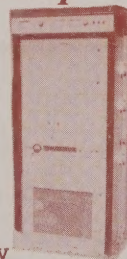
TN-612/G PREPOST SELECTOR, Magnavox-made unit related to RT-1512/GRC-215 HF SSB receiver-exciter. Consists of RF preselector and broadband power amp. Preselector

operates in four bands 1.8-3.6, 3.6-7, 7-14, and 10-24 Mhz. Microprocessor-controlled unit has no front panel controls except ON-OFF and indicators for OV DE, OVL, ATT, BITE, TUNE plus TNC connections for RX/TX, RX, and TX. External (and unknown) data input necessary for intended operation. Preselector utilizes large silver-plated coils and 3-gang variable capacitor. Frequency is selected by twelve Kilovac HC-1 vacuum relays and nine mini-coax relays along with motor interface adapters. Relays actuated by driver transistors. RF power amp uses four transistors S15-28, T9-0664 and two MRF-466 as output amplifiers. No further info at this time. Requires 115/230 VAC 50-60 Hz; 4.5x19x17, 46 lbs sh. UNUSED, \$250.00

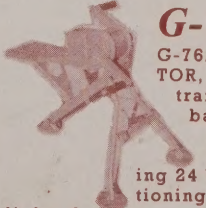
### 3 KW HF Power Amp

COLLINS 208U-3 POWER AMPLIFIER automatically tunable over 2 to 30 Mhz SSB-AM-CW @ 3 KW PEP using 4CX3000A tube driven by two 4CX350 tubes. Requires 0.2 W

RF input; 2 W max during tune cycle. Auto-tunes using servo system or manually controlled for test purposes. Tune time 15 sec nominal, 20 sec max into 50 ohm antenna. Input imped: 50 ohms, max VSWR 1.3:1. Output: 50 ohms, max VSWR 3:1. Requires: 200-250 V 3-wire 30 30 amps 47-420 Hz; 1200 W Standby, 9100 W CW @ 2.5 KW. 72.5x32.6x31; 1020 lbs. USED, "not-tested" less 4CX3000A, \$3250.00 4CX3000A, USED-lab tested, \$450 w/set purch.



### G-76 Generator

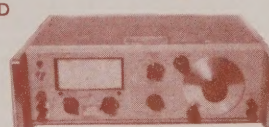


G-76/G HANDCRANK GENERATOR, powers PRC-70 backpack transceiver & charges BB-542 battery. Unfolds to make 3-legged seat for operator to crank generator producing 24 VDC 2 amps. Power conditioning module has two indicator lights & regulator. With CX-13175 & CX-13176 cables and canvas bag. 32 lbs. USED, \$149.50 AS-2975/PRC-70 DOUBLET ANTENNA, new, \$30

### HP Distortion Analyzer

HEWLETT-PACKARD 331A DISTORTION ANALYZER, solid-state unit measures total distortion to 0.1% of full scale over

5 Hz to 600 KHz and harmonics indicated to 3 Mhz. Distortion levels of 0.1% to 100% measured full scale in 7 ranges and noise levels as low as 50 mv. Fundamental rejection >80 DB. Wide voltmeter indicates 300 uv to 300 V rms full scale in 13 ranges, 10 DB/range. Requires 115/230 VAC 60 Hz; 16.8x5 x13.3, 22 lbs. USED-CHECKED w/book, \$215.



### Audio Oscillator

HEWLETT-PACKARD 200CD OSCILLATOR, popular vacuum tube audio generator covers 5 Hz to 600 KHz in five bands X1-10-100 -1K-10K; variable output 10 volts into 600 ohms or 20 V open circuit. Requires 115/230 VAC 50-400 Hz; with manual copy. 7"Wx10.8"Hx12.5"D, 20 lbs sh. USED-REPARABLE, \$85.00; CHECKED, \$125.



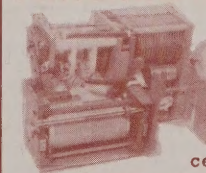
### TA-838/PT Phone

TA-838/PT MILITARY FIELD TELEPHONE has push-button numeric tone pad and is designed for 2- or 4-wire communications; replaces old EE-8 and TA-43/312 field phones. Ringing signal audible only in 4-wire hook-up. TA-838 also operates over standard telephone lines. Rugged thermo-plastic construction; requires four C-cell batteries. 6x9.8x5, 8 lbs sh. USED: CHECKED, \$95 \$69.50; Operator MANUAL \$10.



### Antenna Load Assembly

from AM-3349/GRC-106, includes L1 0.5 to 40 uH variable inductor, L2 37 uH fixed inductor, C27 15-355 pf air capacitor, 26/ 1000 pf feed-thru caps, S1 2-deck 5-position ceramic switch and two Globe or = 24 VDC motors. LESS C26 vacuum variable capacitor. Cutting of plastic supports is required for individual parts recovery. 5.5x 9.5x5.5, 10 lbs. #AL-AM3349-96, USED \$29.50







## RFI STRIP

STEEL MESH over 1/2" square foam stripping seals and reduces unwanted radio frequency interference of RFI generators like transmitters, oscillators and computers when installed between cabinet and chassis. Strip is 16 ft long and can be cut; 4 lbs. #RFI-8820, NEW, \$12.95

## J-47 Code Key

consists of military J-37 key on a 5"x2.8" black plastic or phenolic base; no short bar. 2 lbs. USED \$27.50  
+++++  
STEEL LEG CLAMP, J-47 slides into bracket & hinged clamp fits onto operator's upperleg for field use; 2 lbs. #5895-324-9111, UNUSED, \$8.



## COMPUTER CABLE

COMPUTER CONTROL CABLE with male DB-25 connector on one end and female on other; all pins wired. #24 AWG 300 V wire in gray PVC jacket. 25 foot length makes for nice peripheral extension cord; 4 lbs sh. Paradyne #835-3564-2511, NEW, \$14.95



## 60 HZ FREQ-METERS

5-REED LINE FREQUENCY METER, for 125 V AC line frequency 59 to 63 Hz; 3.5" dia, 1 lb sh. Arnoux-Aero #6915-134, NEW, \$14.95  
+++++  
JBT 10-REED freq-meter, 48 to 52 & 58-62 Hz; 3.5" dia. #30-FHXX, NEW, \$34.00



## 2 X 20 A Filter

RFI LINE FILTER, 2 x 20 amp 115 to 250 VAC 48-440 Hz; 3.4x1.5 x3.2, 1 lb. #F-85066, NEW \$3.50  
2 for \$6.00, 10 for \$25.00, 100 for \$195.00



## Energy Capacitors

27 MF 700 VAC NON-PCB CAPACITOR, 9.3"Hx4.3"Wx2.7"D, 8 lbs sh. Captron #958-472602, NEW, \$7.50  
+++++  
ENERGY STORAGE CAPACITORS removed from equip; 10x4.5x3.5, 10 lbs: 32 MF 4500 VDC, \$36.00 \$30.00  
88 MF 1200 VDC, \$17.50 224 MF 1500 V, \$27.



## 7-1000 pf Vacuum Cap

VACUUM VARIABLE CAPACITORS removed from equipment; 5 KV hi-pot tested. 1/2" dia shaft; 4 lbs sh. SPECIFY: Jennings #EL5-1000, ceramic-type, \$149.50  
Jennings #UCSL-1000, glass-type, \$150.00  
Jennings #CVCH-1000, ceramic-type, \$165.00



## Project Box

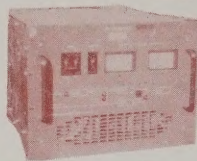
RACKMOUNT CHASSIS, o/a 3.5"Hx19"Wx17.2"D; behind panel tray 2.4"Hx17"Wx17"D. Suitable for projects using circuit cards, etc; aluminum, 6 lbs sh. #CH-3519-MAG, USED, \$12.50



## PRC-90 Tester

AN/PRM-32A RADIO TEST SET for AN/PRC-90 UHF & PRC-106 VHF survival radios. Requires use of one radio as receiver and another as transmitter. Tests distress 243 Mhz frequency for beacon, transmitter MCW-voice, and receiver outputs. Also Tx-Rx voice outputs for 282.8 Mhz (PRC-90) and 121.5 Mhz (PRC-106), earphone, and battery test. Has 1.8" square meter with red-green scale, Tx-Rx connector adapters for radio hook-up, and operator's info. 3x5x4, 3#. USED, \$24.95; MANUAL, partial repro, \$8.50

## POWER DEVICES



DELTEC MODEL 1820 UN-INTERRUPTIBLE SUPPLY (UPS), designed to protect sensitive electronic equipment by providing regulated AC line power during power outages, line fluctuations or fast transients.

Input: 120 VAC 32 amps. Output: 120 VAC 15 amps 60 Hz. Utilizes charger-battery-inverter circuit paralleled by AC bypass line. Requires 84 VDC rechargeable battery pack (not available). Meters 30-150 VAC & 5-25 A-AC. 14x19 x21, 250 lbs. USED-EXCELLENT w/book, \$395.  
+++++  
STACO E1010-VA AUTOTRANSFORMER, output 0-120/140 VAC 9 amps from 120 V 50/60 Hz in. Meters for 0-150 VAC & 0-2-10 amps and AC outlet. 10x15x6, 25 lbs sh. EXCELLENT, \$165.  
+++++  
PP-7482/G STATIC FREQUENCY CONVERTER, changes 115 V 60 Hz input to 400 Hz output 1000 watts. Internal pots adjust output voltage and freq. Made for Rockwell (#622-3861-001); 19x5.5x19.5, 55 lbs sh. USED-CHECKED, \$750.  
+++++

## DC POWER SUPPLIES

CPS HIGH VOLTAGE SUPPLIES, 0.001% reg.; 105-125 V 47-440 Hz in. 4.5x4.6x9, 15#. NEW: #2500N, + 500 to 2000 V 5 ma, \$65.00  
#11300P, +30,000 V 125 ua, \$100.00  
#1079, +900 to 2000 V 5 ma with 0-2 KV meter & front V-control; rackmount, \$100.

LAMBDA DC SUPPLIES, 105-132 VAC 60 Hz input; metered with +/-5% voltage adjust. NEW: #LMF280VMYR, 28 V 19 A out; 62 lbs, \$195  
#LMG15VMYR, 15 V 45 A out; 78 lbs sh \$200  
#LMEE15-YR, 15 VDC 19 amps output; not metered. 5x7.5x16.5, 40 lbs sh. \$75.00  
HARRISON (H-P) 6274A DC SUPPLY, output 0 to 60 VDC 15 amps from 115 VAC 60 Hz in. With meters; 5x19x18.9, 54 lbs sh. USED, \$250.00

## VARO HV SUPPLY

VARO 3093A HIGH VOLTAGE DC SUPPLY, mini-size designed to power night-vision scope. Puts out -8 to -14 KV from 3 to 6 VDC input of C- batteries (not supplied). Case positive; 2.5"Lx1" dia. CHECKED, \$24.95  
+++++  
#077-1688 HV SUPPLY, similar to above except output 16 KV from 1.5 VDC input. NEW \$39.50



## Vibrator Supply

PE-104A VIBRATOR POWER CONVERTER used in World War-2 BC-654 Rx-Tx (SCR-284) 6 or 12 VDC input produces 90 V, -45 V, 1.5 VDC output. 4x4x7, 10 lbs sh. UNUSED w/spare vibrator, \$24.00

## GPS BATTERY BOX

AA-BATTERY BOX for Trimble Navigation Trimpack GPS receiver. Clips onto and allows operation of Trimpack from eight common AA batteries (not included). 1.6x6.5x1.5; 1 lb sh. #GPS-13828-00, NEW, \$22.

## Manual Switchboard



SB-993/GT MANUAL SWITCHBOARD, designed for quick "connect/disconnect" of up to six battery or sound-powered field phones (such as EE-8, TA-1, TA-43/312) plus an operator unit. Consists of seven U-184/G terminal plug-jacks that plug into "stack" onto rear of another U-184. Active lines make neon lamp in U-184 "glow". Also includes MT-2156/GT metal case; 1.3x12x3, 6 lbs sh. USED, \$17.95

## ELECTRON TUBES

All UNUSED in original military or commercial boxes; quantities available for most types:  
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1N5GT RCA \$3.50	1U5 GE, RCA \$4.50
2A3 Penta-USA (looks Chinese made), \$14.00	
2E26 RCA \$6.00	2K25 Raytheon, \$40.
3TF7/RT510 \$17.50	3V4 ECG, \$5.00
4CX300A/8167, \$65.	4D32 Raytheon, \$35.
5R4WGB Cetron, \$4.00	5V4GA Sylvania \$4.50
6AJ5 Tungsol, \$3.50	6AN8 Sylvania, \$3.50
6AZ8 various US \$8.50	6B4GA Sylvania \$17.50
6BL7GTA GE \$4.00	6BN8 ECG \$6.50
6CB6A RCA \$3.00	6CW4 RCA, \$4.50
6EA8 GE, RCA \$4.00	6EB8 GE, \$4.50
6EJ7 England \$3.00	6J7 metal RCA \$4.00
6SC7 GE \$4.00	6SG7 RCA \$3.00
6SK7GT various US, \$4.	6U8 Sylvania \$4.00
12BE6 GE \$3.25	47 various US, \$6.50
58 Sylvania, \$4.50	955 RCA acorn \$3.50
1625 Nat-Union \$4.50	5691 Richardson \$6.50
5751 ECG, \$3.50	5814A ECG, \$3.25
5998A Syl, \$9.95	6012 RCA \$25.00
6146W GE, \$19.95 ea;	10 for \$175.00
6922 ECG (=6DJ8) \$3.50 ea;	10/\$28. 100/\$200
7025 GE (=12AX7) \$7.50	7189A Hungary \$6.50
7360 ECG, \$15.00	7586 RCA nuvist \$10.
7587 RCA nuvist \$15.	8582 ECG, \$12.00
7581A ECG (=6L6GC) \$17.50 ea.	10 for \$150.
7581A GE, \$18.50 ea.	10 for \$160.
+++++	
4CX300F/FJ Eimac 26 V, USED, JFF-tested, \$35.	
7077 mini-planar tube, USED, JFF tested, \$20.	
7554 mini-pencil tube, USED, JFF-tested, \$22.	

## Pin Straightener

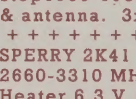
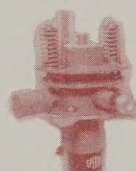
GENERAL ELECTRIC TUBE PIN STRAIGHTENER for 7- and 9-pin miniature tubes; red-blue plastic, 2.9x1.3x1.1. GE #55-128, NEW, \$2.95 ea



## REFLEX KLYSTRONS

SRL-7H REFLEX KLYSTRON for 2160-2400 Mhz; Requires 6.3 V filament, -1000 VDC beam V; reflector volts adjustable -1300 to -2000 V. Has Coarse & Fine Tune slugs, N-connection and octal base. 6.5"Hx5.2"x4.5", 4 lbs sh. UNUSED w/info, \$49.50  
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CU-368/TRC-29 DUPLER for use with xmitter using SRL-7. Low Pass: pass 1700-1933 Mhz; stop 2050-2400. High pass: pass 2050-2400; stop 1700-1933. C-connections for input, output & antenna. 3x16.5x9, 20 lbs sh. UNUSED, \$25.  
+++++  
SPERRY 2K41 REFLEX KLYSTRON, 2660-3310 Mhz, 20 mw-2.7 W. Heater 6.3 V 1 A. Beam 300-1250 V. 15-60 ma. Reflector 0 to -750 V. Has integral tuner & resonant cavity; octal base. 4.5x5.5x2.3, 3#. Unused w/data, \$45.00  
+++++  
VARIAN VA-98M/8901 KLYSTRON, 23.6 - 24.4 Ghz 100 mw CW; Eb=500 V @ 40 ma. 2.8"Lx 1"Hx1.3"D w/ 6"L wire leads; 1 lb. NEW, \$125.



## 4CX Socket & Chimney

SK-630/636 TYPE SOCKET & CHIMNEY SET for 4X150/CX250/350 tubes. Socket has 1100 pf screen bypass capacitor with cathode ground. Black plastic chimney is 2.6x2.6 at base and includes locking clamp; Eimac or Johnson =. USED, \$19.95/set

## 200 Ohm Headset

MATROX/TANDBERG headset intended for language lab use; 200 ohms total. Has padded headband and very comfortable 4" dia covered foam cushions. 7 ft long cord with 1/8" dia dual circuit plug; 2 lbs sh. #HS-38086, NEW \$9.95





## PRR-9 / PRT-4A Radios



GOV'T-RECONDITIONED each single channel with crystal for 51 Mhz FM use: #PRR-9 RECEIVER with earphone, antenna, & operator manual. Requires 5 V 25 ma battery power; 7x 3.5x1.5, 3 lbs. ~~\$50~~ \$40 #PRT-4A TRANSMITTER, two channels and Tone - Voice switch; 450 MW Channel 1. Requires 12 VDC input; 9x 3.6x2, 2 lbs. W/antenna & battery box, ~~\$50~~ \$40 MANUAL for PRR-9/PRT-4A, partial repro, \$15.

## USB Receiver-Exciter



RT-662/GRC-106 RECEIVER, 2-29.999 Mhz USB-AM-CW-FSK using 5-decade mechanical switches to 1 KHz increments + vernier. Exciter output 100 MW. Controls: Service Selector, PA Load, Squelch, Noise Blanker, BFO, & audio functions. LESS Signal Level meter. Requires 24 VDC 10 A; 7x18x13, 56 lbs. USED: "AS-IS" not tested/LESS meter, ~~\$250~~ \$195. "CHECKED" with meter (not original), \$350. RT-834/GRC-106A, similar to RT-662 above but 2-29.9999 Mhz, 0.1 KHz increment. USED: AS-IS no meter \$345. CHECKED w/meter \$495 MANUAL for GRC-106/106A partial repro, \$45. POWER CONNECTOR for RT-662/834, \$7.50 115 VAC POWER SUPPLY usable f/RT-662/834; no AC cord or connector; 34 lbs. NEW, \$49.50 LS-166 SPEAKER for above; 5 lbs. USED, \$16. + + + + + AM-3349/GRC-106 POWER AMP for RT-662/834; amplifies 100 MW RT output to 200 W AM or 400 W PEP. Requires 28 VDC 1 KW max; 77 lbs sh. USED-"AS-IS", less meters, \$528-00 \$400.

## HP-606B HF Generator



HP-606B SIGNAL GENERATOR, 50 KHz to 65 Mhz in six bands +/-1%; output 0.1 uv-3 V into 50 ohms. Modulation 400 or 1000 Hz. Calibration every 100 KHz & 1 Mhz. Auxiliary output allows use of HP-8708A synchronizer for phase-lock stability. 10.5x20 x13.5, 65 lbs. USED-CHECKED w/book, \$295. + + + + + HP-8708A SYNCHRONIZER, adds phase-lock freq-stability to HP-606B & 608F generators. 4.5x19x13.5, 31 lbs. USED-REPARABLE, \$150. + + + + + HP-302A WAVE ANALYZER, 20 Hz-50 KHz; modes APC-Normal-BFO; Resolution 10 Hz/div. Meter ranges 30 uv-300 Vrms in 15 steps; dynamics >75 db. 600 ohm imped; BFO output 0-2 V open circuit. 12.5x20.8 x14.5, 50 lbs. USED-REPARABLE w/book, \$135.



## H-P COAXIAL ITEMS



HP-11691D DIRECTIONAL COUPLER, ultra-wide single directional coupler for 2-18 GHz range. Mean output: 22 db. Min. directivity: 30 db @ 2.8 GHz, 26 db 8-18 GHz. With two APC-7 (primary) and one N (aux) connectors. 8 lbs sh. UNUSED, \$375.00 HP-905A COAXIAL SLIDING LOAD, low-reflection 50 ohm load for 1.8-18 GHz. SWR 1.05; 1 W average, 1 KW pk. With interchangeable N male, N female & APC-7 connectors & plastic case. 17.3"L, 3#. USED, \$100.00 HP-11854A 50 OHM BNC ACCESSORY KIT with 8 adapters: 2 ea N male to N female, N (m) to BNC (m), N (f) to BNC (f), N (f) to BNC (m); also one BNC (m) short conn. With 2.6"x7.3"x5.2" walnut wood case; 4 lbs sh. NEW, \$40.

## TEST EQUIPMENT

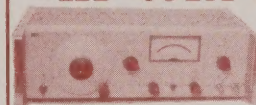
HEWLETT-PACKARD, TEKTRONIX & OTHERS, limited stock; USED-REPARABLE with output: \* \* \* \* \* HP-180D SCOPE w/1805A 100 Mhz 2-trace & 1825A time base plug-ins, ~~\$475~~ \$325. 182T/8557A SPECTRUM ANALYZER, 0.1 to 350 Mhz; log cal -117+20 dB. \$1250. 214B PULSE GENERATOR, "like new", \$1500 419A DC NULL METER, 3 uv-1 KV, \$135 1200B SCOPE, DC-500 KHz dual trace, \$195. 1710A SCOPE, DC-150 Mhz dual-trace, \$395. 1722B 275 Mhz DELTA-TIME SCOPE w/CPU, 5-function LED display, 1 ns sweep, \$550. 1741A SCOPE, 100 Mhz storage w/3rd channel trigger view, \$300. CHECKED, \$450. 1980B SCOPE MEASURING SYSTEM w/1950A module; bad A-1 board. AS-IS, \$1200. 3406A RF VOLTMETER, 10 KHz-1.2 GHz, \$400 3456A INTEGRATING DVM, \$600. 3490A 5-DIGIT MULTIMETER, ~~\$280~~ \$195 3495A SCANNER switches analog data, \$100 5180A WAVEFORM RECORDER, \$1795 5300B/5312/5304 8-DIGIT COUNTER/TIMER with HP-1B interface module, \$195 5327C 500 Mhz FREQUENCY COUNTER, \$135. 8005B PULSE GENERATOR, dual +/-10 V, \$250 8080A PULSE GENERATOR MAINFRAME with 8081A rate generator, 8084A word-generator, two 8093A 1 GHz amp, \$1250 8403A MODULATOR CONTROL w/8732B, 8733B or 8734B PIN modulators, \$295. 8405A VECTOR VOLTMETER, 1-1000 Mhz \$335 8410B NETWORK ANALYZER w/8414A polar display & 8411A freq-converter, \$595 8412A PHASE/MAGNITUDE DISPLAY, \$250. 8507A RF NETWORK ANALYZER, includes 8505A, 8503A, & 9845 computer, \$1995 8614A RF GENERATOR, 800-2400 Mhz, \$350. 8660C RF GENERATOR w/86602B 1-1300 Mhz & 86633B AM/FM Lock FM plug-ins, \$2295. 8660B with 86602A and 86633B, \$1995. 8697A OSCILLATOR 26.5-40 GHz f/8690 \$495 8697A-H50 OSCILLATOR, 33-50 GHz, \$495 8743A REFLECTION TEST, 2-12.4 GHz, \$295. + + + + + TEKTRONIX DC501 COUNTER PLUG-IN, \$195. FG501 2 Mhz FUNCTION GENERATOR \$150. FG5010 20 Mhz FUNCTION GENERATOR, \$495. AM502 DIFFERENTIAL AMP MODULE, \$250 DC502 opt 1 550 Mhz FREQ-COUNTER, \$145 5A15N SINGLE TRACE, DC to 2 Mhz, \$45. 7A13 DIFFERENTIAL COMPARTOR AMP \$195 7A16A SINGLE TRACE, DC to 275 Mhz, \$75. 7A18 DUAL-TRACE, DC to 75 Mhz, \$65. 7A42 LOGIC TRIGGERED AMP, 4-chan \$750. 7B53A DUAL TIME BASE, DC to 100 Mhz, \$75. 7B80 DELAYED TIME BASE to 400 Mhz, \$195. 7B92A DELAYED TIME BASE to 500 Mhz \$250. 7D15 COUNTER-TIMER to 225 Mhz, \$195. 7L5/025 SPECTRUM ANALYZER PLUG-IN, 20 Hz-5 Mhz with 025 tracking generator and L2 or L3 plug-in module, ~~\$1950~~ \$1650. R230 DIGITAL PROGRAMMER f/Tek 568 \$300 422 PORTABLE SCOPE, 2-trace 15 Mhz \$150 434 PORTABLE STORAGE SCOPE 25 Mhz \$450 454A SCOPE, DC - 150 Mhz, dual-trace, \$300 R491 SPECTRUM ANALYZER, 10 Mhz to 40 GHz with mixer kit; rackmount, \$1695. 7613/7L13 SPECTRUM ANALYZER, storage mainframe, plug-in 10 KHz-1.8 GHz plus reference level module. ~~\$2750~~ \$2750. 7834 STORAGE SCOPE MAINFRAME, \$300 + + + + + ANALOGIC AN3100 DC VOLT STANDARD, digital; ranges 0.0001 to 1 V, \$150 BOONTON 9200B RF MILLIVOLT w/probe \$335. DATRON 4200 AUTO/CAL AC STANDARD, \$695. EFFRATON MRT-H RUBIDIUM FREQUENCY STANDARD, outputs 0.1-1-5-10 Mhz, \$1995. FAIRCHILD ELECTRO-METRICS R-70B RFI RECEIVER uses 9 tuning heads covering 0.1 to 1100 Mhz; with two cases & manual, \$1695. KEITHLEY 140 PREC-NANOVOLT DC AMP, \$100 487 PICOAMMETER/VOLTAGE SOURCE, \$295 KROHN-HITE 4100R AUDIO OSCILLATOR, \$150 LING MS300 SINE VIBRATION CONTROL \$125 MARCONI TP2300B AM/FM MODULATION \$495. 6960 RF POWER METER digitl; no probe \$125

## Universal RLC Bridge



ZM-11 TEST SET, portable bridge measures capacitance, inductance, resistance, transformer turn ratio, dissipation of C & L and storage of L at 1 KHz. Insulation & leakage of electrolytics in circuit @ 10.75 Mhz. Capacitance: 10 pf-10 mf, 1 mf-100 mf, 10 mf-1100 mf 500 VDC max. Inductance: 0.1 mH-1 H, 1 H to 10 H, 10 H-110 H. Insulation DC res: 200-500 megohms, 5K-10K megohms. Transformer turns: 0.01-110 (K=1). DC leakage: 0.1-5-25 ma. Dissipation: 0.06 (10 pf-0.1 mf), 0-0.6 (0.1 mf-1100 mf). Q Storage: 0.5-20. Uses test leads with banana jacks (not supplied). W/tubes 6E5, 6J6, 2/6AV6, 6AG5, 6AL5, 6AQ5, 6X4. Requires 115 V 50-1000 Hz; 5.8x9x9.8, 18 lbs. USED-REPARABLE, \$90.; CHECKED, \$130.00; MANUAL, partial repro, \$10

## HP-652A Oscillator



HP-652A TEST OSCILLATOR, 10 Hz to 10 Mhz in ten bands. Output 0.1 mv to 3 V in 10 ranges. Attenuation

-70 db to +20 db in 10 db steps. Distortion <1% 10 Hz-2 Mhz. Output impedance 50 and 600 ohms; BNC connections. Requires 115/230 VAC 48-66 Hz; 5x16.8x11.5, 28 lbs. W/manual. USED-CHECKED, \$225.00; UNUSED, \$350.00 + + + + + HP-205AG AUDIO TEST SET, 20 Hz-20 KHz, 5 W max into 50-200-600-5K ohms. Two voltmeters allow measure of input & output. Input 0-45 db, 5 db steps. Output 0-110 db, 1 db steps. 12.8x20.8x15.5, 65 lbs. USED-reparable w/book, \$195

## HP-3586B Selective VM



HEWLETT-PACKARD 3586B FREQUENCY SELECTIVE VOLTMETER, performs carrier frequency measurements over 50 Hz to 32.5 Mhz @ 75 ohm input and voice level over 50 Hz to 100 KHz @ 600 ohms. Measures tone level, idle channel noise, or weighted noise at voice and compare to carrier frequency. Built-in frequency counter designed to measure to +/-1 Hz, 0.1 Hz resolution. Uses fraction N-synthesized local oscillator for precise freq-settings. Amplitude range +20 to -130 dBm; resolution to 0.01 dBm. With Transmission Impairments Option 003 for measure of phase jitter, noise-with-tone, signal-to-noise with tone ratio and single level impulse noise. Push-button control and entry; HP-1B programmable. North American Bell standard. Requires 100/120/220/240 VAC 48-66 Hz; 7x16.8 x18.4, 62 lbs sh. USED-REPARABLE, \$695.00

## HP Analyzer Plug-In



HEWLETT-PACKARD 8553B SPECTRUM ANALYZER PLUG-IN for HP-141T mainframe; covers 1 KHz to 110 Mhz in bands 0-11 and 0-110 Mhz. IF bandwidths: 10 Hz to 300 KHz, 1-3 sequence. Scan widths on 10-division CRT: 20 Hz/div to 10 Mhz/div in 18 calibrated steps, 1-2-5 sequence. 4x8.9x13.5, 17 lbs. USED REPARABLE, \$250. Manual, partial repro, \$17. HP-8556A, similar to 8553B but covers 20 Hz to 300 KHz range. USED-REPARABLE, \$175.00

MILITARY TS-488A X-BAND ECHO BOX, \$400. URM-120 WATTMETER 2-1000 Mhz 500W \$165 NLS TR-1 SIGNAL TRACER, \$100 NORTH ATLANTIC 225 PHASE ANGLE, \$795 PRINCETON AP-RS 129A 20 LOCK-IN AMP \$150 PTS 160/M62CX SYNTHESIZER, 0.1-160 Mhz programmable GPIB; 1 Hz resolution, \$595 ROCKLAND 5600 SYNTHZER, 0.1-160 Mhz \$495 WAVETEK 145 PULSE/FUNCTION 20 Mhz \$145 750 DIGITAL PHASE METER, \$350. 1001-15 SWEEP GENERATOR 0.5-300 Mhz \$295. 2001 SWEEP GENERATOR, 1-1400 Mhz, \$650.



## AM-6154 VHF Amplifier



AM-6154/GRT-21 POWER AMPLIFIER (ITT 3211) conservatively rated for 50 watt output from 10 watt exciter input over 116-149.975 MHz; uses Eimac X651Z/8930 or Amperex DX393 tetrode (no choice) in silver-plated cavity-drawer; 175-turn TUNE counter dial. Main chassis has solid-state power supply and buffer amp/multiplier; panel meter monitors voltages. Requires 105/120/210/240 VAC 50-400 Hz and +20 V reg 60 ma, +20 V keyed; w/schematic info. 7x19x18.5, 80 lbs sh. USED, not tested, \$288.00  
AM-6155/GRT-22 AMP, 225-400 Mhz, \$235.00

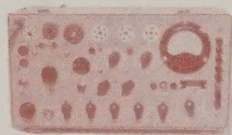
## W-J RS-111B Receiver

WATKINS-JOHNSON RS-111B-17C VHF-UHF RECEIVER with built-in 3"Wx1.5"H spectrum display



CRT. Covers 30-1000 Mhz AM-FM-CW in bands 30-60, 60-300, 235-500, and 490-1000 Mhz separately controlled. Bandwidths: 2 Mhz simultaneous with selectable 20, 75, or 300 KHz; 21.4 Mhz IF. Display sweep: 0 to 3 Mhz continuous; sensitivity 2.5 uv. Audio out: 600 ohms. Has Signal Strength meter and controls for display, bandwidth, emission, bands, RF Gain, Video Gain, BFO. Solid-state except for nuvistors six 6CW4, 2/7077, 7586, 3/7587, 2/8058 used in tuners. Requires 115/230 VAC 50-400 Hz; 5.3x19x15.5, 40 lbs sh. USED-EXCELLENT, \$695.00  
MANUAL, partial reproduction, \$35.00

## TV-7 TUBE TESTER



TV-7 TUBE CHECKER tests most military and older commercial receiving & low-power xmitting tubes. Indicates dynamic mutual conductance, emis-

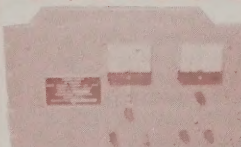
sions, gas, noise & shorts. Test sockets for octal, loctal, 4-, 5-, 6-, 7-pin, 7- and 9-pin miniature, acorn, flat and round subminiature tube base sizes. With tube test data book & one test lead. Requires 115 V 50-1000 Hz. 6.3x8.5x15.8, 22 lbs sh. USED-CHECKED, \$135.00  
MANUAL for TV-7-A-B-D, partial repro, \$10.  
TUBE TEST ADAPTERS for TV-7, used:  
#E104 for sub-mini tubes, \$5.00  
#E105 for 829/832, \$7. #E107 for 2C39, \$7.

## PIQ-5 MEGAPHONE

AN/PIQ-5 PUBLIC ADDRESS SET, pistol-grip power megaphone; 15 watt output to address large groups of people indoors or out. 8.5" dia cone; 400 ohm input impedance, 10 ohm output. Aluminum construction; weighs 5 lbs net. Includes detachable mic with coil cord, 25 ft extension cord & transit case. Requires ten D-cell batteries (not included). O/a 14.3"Lx11.5"H; 18 lbs sh. USED, \$49.50



## 0-36 VDC 15 A Supply



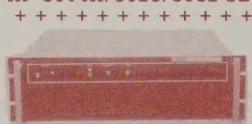
PP-2309C DC POWER SUPPLY, metered output 0-36 VDC 15 amps with controls VOLTS ADJ, DC Output ON-OFF; +/- terminals, fused input and DC Outputs. Requires 115/230 VAC 50-60 Hz 10/5 amps. Triagelectron mfg; 10.5x19x13.5, 75 lbs sh. USED, \$145.00  
MANUAL for PP-2309C, partial repro, \$8.50

## HF-80 EQUIPMENT

HF-8014A 4-CHANNEL EXCITER for use with HF-8020/21/22/23 power amps. Output 250 mw PEP over 1.6 - 29.99999 Mhz AM-CW-LSB. With options 10 Hz resolution, oven freq-standard & input for external standard. Requires 100/115/215/230 VAC 47-420 Hz; 6.8x19x20.8, 52 lbs.



#622-3473-211, USED-EXCELLENT, \$2950.00  
HF-8023 1 KW POWER AMPLIFIER, utilizes one driver plus four 250 W power modules to achieve rated output; VSWR: 1.3:1. Designed for use with HF-8014A exciter and power supplies HF-8031 or 8032. 10.5x19x25, 62 lbs sh. HF-8023 (622-3490-207) USED-not tested \$3500  
HF-8023 with HF-8032 208/220/230/240 V 3 Ø power supply; no interconnect cables. (HF-8032: 9x19x24, 90 lbs.) Not tested, \$4500.00  
HF-8014A/8023 SET (no cables), \$6250.00  
HF-8014A/8023/8032 SET (no cables), \$6950.00



HF 8060 PRESELECTOR automatically tuned bandpass filter for HF-8050/8054 receivers and HF-8014 exciter.

Provides front-end selectivity & overload protection for Rx; improves cross modulation and out-of-band inter-modulation. Has Reset button plus Overload & Fault indicators. Rear input connections: C (Rx), BNC (Tx); output BNC (Rx/Tx). Requires 100/115/215/230 VAC 47-63 Hz. 5.3x19x24, 30 lbs sh. USED-EXCELLENT, \$850.

CU-2294/TSC-60 (HF-8040A) ANTENNA COUPLER for HF-80 1 KW xmitters; matches antenna to power amp over 1.6 to 30 Mhz SSB-AM-CW. Tunes 3 sec average; 7 sec max. Aluminum enclosed for outdoor use; also antenna mount base for whip antenna & canvas cover. Requires 115/230 V 50-60 Hz. 19x21x50, 130 lbs sh. USED, \$895.00  
MANUAL for CU-2294/TSC, partial-repro, \$35.

DIPLEXERS for HF-8040, p/o 156X-1 configuration; 65 lbs sh each. USED, \$300 ea. SPECIFY: #835U2 (7 Mhz), #835U4 (14.5) or #835U5 (21)



## RL-172 Reeler

RL-172\*/G REELING MACHINE, motor-driven unit mounts on back of small truck to lay-out or recover field phone wire from/onto RL-159 reel. Uses 24 VDC

11 amp 1/4 HP 1400 RPM motor or can be manually cranked. Max lay-out speed 25 MPH; recovery 7-17 MPH. Could probably be modified to function as winch. Includes vehicle mount plate; 20x27x22, 130 lbs sh. USED, \$250.00  
MANUAL for RL-172, partial reproduction, \$10.  
MX-7247/7248 MASTS for guiding field wire; MX-7247 mounts on vehicle rear and MX-7248 (48"L) on front. Masts 1.4" dia; 10 lbs sh. USED, \$20.00/set when purchased with RL-172\*

WD-1A/TT FIELD TELEPHONE WIRE on RL-159 steel reel, consists of 1 mile (5200 ft) twin lead black vinyl-covered steel wire. Intended for use with EE-8, TA-43/312, TA-1, TA-838 and similar field phones. Reel 20" dia; 50 lbs sh. UNUSED, \$125.  
MX-306A FIELD WIRE KIT, 1/2 mile (2600 ft) WD-1A on 10" dia reel; 22 lbs. UNUSED, \$75.00

## DUMMY LOAD

DA-75 DUMMY LOAD, rated 500 watts normal or 1000 W over 1.3-2700 Mhz when forced air cooled; 51 ohm input. LC input connection; RLC mfg. 6x8.4x21, 24 lbs. USED \$125



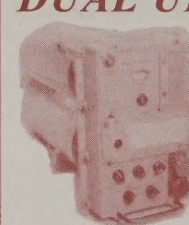
## RECEIVER COUPLERS

CU-1382F HF RECEIVER COUPLER, solid-state unit permits up to eight 2-32 Mhz receivers on the same antenna. VSWR < 1.5:1. Gain 2 +/- 1 db; noise figure 7 db nominal. 50 ohm input & output. RF overload protection > 10 Vrms. BNC connections. Rackmount panel has space to mount second coupler. Requires 105-125/210-280 V 50-60 Hz. 1.8x19x15.5, 18 lbs. USED-EXCELLENT, \$105.  
MANUAL for CU-1382F, partial repro, \$15.00



CU-1980/FRR VHF-UHF RECEIVER COUPLER, allows up to four receivers in the 30-300 Mhz range to use the same antenna. Input VSWR 2.4:1; output 1.5:1. Gain 12.5 db +/- 2 db. Noise figure 6 db max. TNC input connections; requires 105-125/200-240 VAC 48-420 Hz. 3.5x19x15.8, 16 lbs sh. USED, \$105.00; MANUAL, partial repro, \$10.00

## DUAL UHF CAVITIES



DUAL SILVER-PLATED UHF ANTENNA COUPLER CAVITY originally part of system which allowed four receivers/transmitters (140 W) to use single antenna. Each cavity 14.5"Lx6" dia with a quarter-wave variable stub (0.2" per turn X 28 turns) over 225-400 Mhz.

Input & output are loop-coupled; cavities are aperture-coupled. Each cavity has 8 tracking slugs. Unloaded Q = 4000, loaded Q 700. Insertion loss 2 DB. (We attached a disk to the moving stub which reduced frequency to below 140 Mhz.) Unit has electro-mechanical drive for 19 preset and one manually selected frequency. Includes weather-tight aluminum cover. Requires 28 VDC, 6.3 VAC, 115 VAC 60 Hz for motor and chopper. 15x9.5x24, 45 lbs sh. #CU-SRA-33, USED w/info, \$79.50

C-4886/SRA-33 CONTROL-POWER SUPPLY with cable for coupler above, 45 lbs. USED, \$75.00 w/set purchase.  
AN/SRA-33 COUPLER SYSTEM in heavy aluminum frame. Includes four cavity-coupler units, power supply, cables, RF selector switch, four power meters, and manual. 48x22x27, 350 lbs sh. USED, \$375.00  
MANUAL for AN/SRA-33, partial repro, \$15.00

MOTOROLA VHF REPEATER with TLN-1434 receiver, TLD1692 xmitter, TPN-1103A power supply & 4-section tunable duplexer. Solid-state; in 22x70x19 rack with doors and two meters. No further info; 175 lbs sh. USED, \$395.00

COLLINS 51S1 RECEIVER, 0.2-30 Mhz AM-USB-LSB-CW; "wing"-label, 38 lbs. USED-CHECKED w/book, \$795.00  
COLLINS 542-4116 DIRECTIONAL COUPLER, (CU-987/GRC-110) with N conn. UNUSED, \$37.  
RACAL 6790/GM RECEIVER, 0.5-29.999999 Mhz AM-FM-CW-LSB-USB, uses microprocessor; w/6 filters & book. USED-EXC CHECKED, \$1495.  
RACAL 2 KHz FILTER f/6790; #23386, NEW, \$75.  
HARRIS RF-110A (AM7127) 1 KW HF power amp w/RF-124 (PP5237) 230 VAC 1 Ø power supply; uses two 4CX1500B. 350 lbs sh. USED, \$1750.  
BG-56 ANTENNA BAG f/MS-49--56 masts. Khaki, 1944 issue; 4 lbs. UNUSED, canvas straps, \$20  
BG-56-L, above with LEATHER straps, \$25.00

SLOPING V LONG-WIRE ANTENNA rated 10 KW 8-30 Mhz; reduced performance to 2 Mhz. Consists of 50/800 ohm 10 KW balun, two 450 ohm terminations, 50 ft RG-393 coax, two 500 ft 0.2" dia guy wire w/insulators. Also four rods, two stakes & manual; originally used with 50' mast; 150 lbs sh (UPS in 4 pkgs.) #VH-830TM/2: USED-EXC, \$250. Above w/15x75x28 TRANSIT CASE, 250 lbs sh (motor freight only), \$300.